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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,283	03/25/2005	Zijing Pang	QLZ 05-1-1	9150

23531 7590 07/02/2008
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EXAMINER

PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

MAIL DATE	DELIVERY MODE
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07/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,283	Applicant(s) PANG, ZIJING	
	Examiner JAMES PILKINGTON	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/25/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the output shaft (clm 1, no reference character provided), an elastic rib cross section being rectangular, groove-shaped, T-shaped, I –shaped or circular (clm 3), a free rotating angle (clm 7) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to for not containing a reference character for the claimed feature of the output shaft as recited in claim 1.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clm 1, the claim recites the limitation "parallel keys" but does not provide a frame of reference for parallel. What are the keys parallel with?

Re clm 4, the claim recites "the shaft coupling is of an integral type or separable type." It is not clear what the shaft coupling is integral or separable with. What is the shaft coupling integral or separable with, is it the bull gear, the rotor, both, or some other feature?

Re clm 7, the claim recites the limitation "a free rotating angle." It is not understood what part the Applicant is referencing as the free rotating angle. What is a free rotating angle and where is it located in the drawings?

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 4-7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Widdrington, USP 3,252,349 in view of Kiernan, USP 3,407,681

Widdrington discloses an elastic couple rotor turning gear, characterized in that:

- an elastic support (11a, 11b and 11c, everything has an elastic property) is mounted on a frame (13) of a driven device (device is a drive mechanism)
- a casing (11d, 11e and 18a) with a U-shaped cross section being connected to the elastic support (11a, 11b and 11c) for providing an elastic connection between the frame (13) of the driven device and the elastic couple rotor turning gear
- a casing cover (16) being firmly fixed on the casing (on portion 11d)
- a speed reducer (gears 21/22 on the right of Figures 1 and 2) and an electric motor (39) installed evenly or symmetrically positioned at an angle of 180°
- an output shaft (20) of the speed reducer (21/22) extending into the casing (11d, 11e and 18a, extends into portion 18a) under the casing cover (16)

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- the output shaft having a pinion gear (19) mounted thereon and meshed with a gear body (teeth on 10) of a bull gear (10) positioned in the casing (11d, 11e and 18a), the bull gear being connected to a shaft coupling (26) and the shaft coupling being fixed on a rotor of the driven device (26 and 27 make the connection to the load, element providing torque resistance)
- wherein the shaft coupling (26) is of an integral type, and the shaft coupling (26) is connected to the rotor of the driven device through a plurality of radial linkages (27)
- wherein an axial sliding clearance (under gear 10, see space on left of Figure 3) and a radial sliding clearance (the radial side of the gear is connected via a bearing 12 which creates a clearance) are formed between the gear body (teeth of 10) of the bull gear (10) positioned inside the casing and the casing (11d, 11e and 18a)

Widdrington does not disclose that the bull gear and the shaft coupling are connected through parallel keys via a key seat or an upright post, wherein an air clearance is formed between an inner round wall of the bull gear and the shaft coupling, and three screws (15) for adjusting concentricity are evenly distributed along a circumference of the shaft coupling, and wherein the bull gear includes a key seat.

Kiernan teaches a bull gear (2) and a coupling (6) that are connected through parallel keys (pins labeled as 8) via a key seat (hole in 6), wherein an air clearance (between back of 2 and 6) is formed between an inner round wall (back wall) of the bull gear (2) and the shaft coupling (6), and three screws (screws labeled 8) for adjusting

concentricity are evenly distributed along a circumference of the shaft coupling and wherein the bull gear (2) includes a key seat (hole for pins and screws 8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the fixed connection between the shaft coupling and the gear of Widdrington with the parallel keys and screws and key seat coupling of Kiernan since substitution of one attachment with another would achieve the predictable result of connecting the gear to the coupling.

8. Claims 2 and 3, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Widdrington, USP 3,252,349 in view of Kiernan, USP 3,407,681 and further in view of CN 99222132.3 (cited by Applicant)

Widdrington in view of Kiernan discloses all of the claimed subject matter as disclosed above.

Widdrington in view of Kiernan does not disclose that the elastic support includes an upper ring and a lower ring, the upper ring being connected to the lower ring through a plurality of elastic ribs and wherein the plurality of elastic ribs are made of an elastic material with a rectangular, groove-shaped, T- shaped, I-shaped or circular cross section.

CN 99222132.3 teaches an elastic support which includes an upper ring (to the right of 4 in Figure 1) and a lower ring (to the left of 4 in Figure 1), the upper ring being connected to the lower ring through a plurality of elastic ribs (at 4) and wherein the plurality of elastic ribs are made of an elastic material with a rectangular, groove-

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shaped, T-shaped, I-shaped or circular cross section (a rectangular cross section is shown in figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use elastic support of CN2385150Y in place of the elastic support of Widdrington in view of Kiernan. Substituting the elastic support of Widdrington in view of Kiernan with the rib type elastic support of CN2385150Y would yield the predictable result of removing rigidity of the device so that it can withstand more of a shock load.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES PILKINGTON whose telephone number is (571)272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P./

Examiner, Art Unit 3682

6/26/08

/Richard WL Ridley/

Supervisory Patent Examiner, Art Unit 3682